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YEAR, 1914

# *The* AMERICAN DENTAL JOURNAL

BERNARD J. CIGRAND, M. S., D. D. S.

Editor    Publisher    Proprietor.

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Instilling a broader and more liberal professional spirit;  
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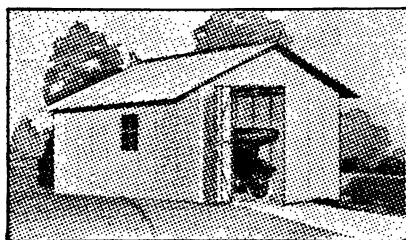
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January 15

EDITORIAL AND COMMENTS

1914

### THE ART AND SCIENCE OF DENTISTRY\*

The art and science of dentistry are twins, and I do not need to emphasize the fact that this theme is a very important one. I might exaggerate this emphasis by saying that it is one of the most important subjects now before the dental profession. There has been a responsibility put upon us which we as a profession can not shirk. Real dental progress rests with us, and this is a duty that absolutely devolves upon us, and no other persons or institutions. This is not a question you can shift or slide over and say it is because the manufacturer is responsible; nor can we say the colleges are responsible; nor

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\*NOTE. This article was the discussion of your editor at the Illinois State Dental Society meeting at Peoria in 1913. It is taken from the stenographic report of Mr. W. Whitford, which was published in the *Dental Review*, page 1166, in 1913.

can we say the societies are responsible; nor can we say the great human family is responsible. This is our own responsibility, and the condition that exists is our own fault. The manufacturers and laboratories do the best they can. They spend thousands of dollars in trying to carry out our ideas. They are—aside from humanity itself—our best friends, and it is up to us to bring to them the patterns upon which we are working.

While visiting, last summer, three or four large plants for the manufacture of teeth, the superintendents of the plants all agreed in saying that the dentists have not yet come to them with a uniform system or method, style, shape or size; and they are patiently waiting. There has been nothing done. So I say, again, this is our own fault. We talk about it; we know the situation; but as an organization we do not take concerted nor concrete action to accomplish anything. It would seem to me this would be the most happy time for the Illinois State Dental Society to do something along that line. I earnestly suggest it, and I would like to see a commission—not a committee—appointed, composed of three members of the Illinois State Dental Society and three of every other state dental society in the United States, and by that means have expressed the concrete action of all state dental societies. This commission should meet at some convenient time (not when another convention is going on), and have diagrams and models so arranged that such a body could form some real concrete basis in this matter. Then when we go to the large manufacturers and laboratories they will indeed be happy to hear from us, and I am satisfied they will be glad to carry out our instructions, because it will be to their interest to do so. They aim to serve and to please us. Then we will be doing something—instead of annually talking about it. It is a great subject, and can not be cast aside nor handled in ten or fifteen minutes. If a large commission of that character met and decided the matter in five or six days, they would be doing a wonderful piece of work. I am in favor of the appointment of a commission that will have this matter



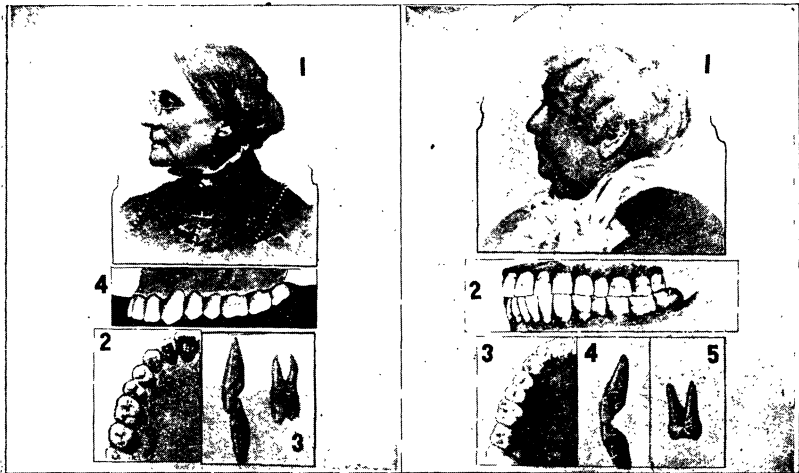
SCIENCES & ARTS

in charge. But my talking of it is not enough, and I hope you realize its importance.

This is a question of temperament—bi-temperament or tri-temperament. The entire world can easily be taken, if you please, into an imaginable laboratory and dissected out and made into three great kingdoms—the animal, vegetable and mineral kingdoms; and the human race, for the purposes of prosthetic dentistry, can be taken into an imaginary laboratory and be divided into motive, mental, sanguine and lymphatic temperaments. Those are absolute or basic temperaments, and when united with each other the result is a bi-temperament. The great Creator has made us to belong in any one or all of these classes. As to the original temperament (called by some the bilious temperament), it is the motive temperament, the great human machine that is cut out on very strong angles—the angular head, the high cheek bones, the Roman nose, knuckled fingers, the dark eyes, swarthy skin, the dark, shaggy, stiff hair, slow mind, angularity everywhere. That motive temperament with big bones is basal. We have the mental temperament, which is a more rounding-off temperament—more grayness, softer hair, rounder forehead, roundish appearance of the malar bones and a cutting away of sharp corners. The hands are softer and bones less prominent, action is quicker, eyes blue or grey, the voice is louder and more penetrating, and the entire system vitalized by nerve energy, and the action of the whole being is swifter. We pass from angularity to a rounding off of the angles in the mental temperament. The sanguine temperament approaches a circle. The sanguine temperament illustrates the circulation, the heart, and the ruddy, flushed face, the soft, warm hands and laughing eyes and smiling mouth—all indicate that it might have been called the cardiac or mirth temperament. These constitute the foundation laid by Spurzheim a hundred years ago, by Gall of Germany, by Combs of England, by Wells of America, by Drayton of America and by Galton and Dalton of England, and accepted by the entire progressive medical profession. We must wake up if we would turn out the kind of work that the world appre-



ciates. Then we have finally the lymphatic temperament, which is a reversion, as it were, and the face resembles an inverted egg, with flabby skin and a sleepy, sluggish look. In these temperaments we have the disposition to deal with and teeth to select which will harmonize. Then comes the question of food itself. With those who live on flesh and meat there is not much rotation of the jaws; because all meat-eating animals open and shut their mouths there is no rotation; and there is not much movement of the condyles in the fossæ. You have



#### MOTIVE AND LYMPHATIC TEMPERAMENTS

simply to regulate the sharp cusps (the angularity), as the mouths of these persons simply open and shut because they love meat. That is the basic idea of the motive temperament.

Then we have the mental temperament, in which there is a rounding of the cusps more and more; and because there is a rounding of the cusps there is a condition which favors more movement from side to side. This mouth does not simply open and shut because it loves meat, but it opens and shuts and slightly slides from side to side because it eats meat and cereals. Then we come to the sanguine or roundhead, the florid skin,

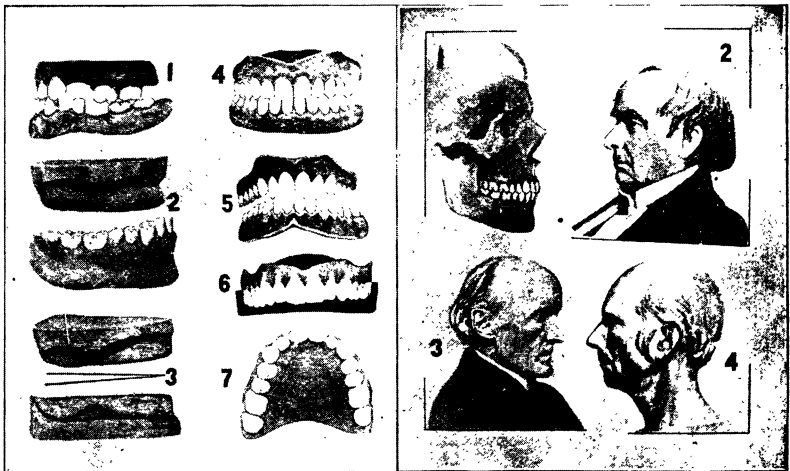
the soft silky hair, the plump flesh about the bones, and their love of gaiety and comfort fits well the forms, with an additional appetite, in view of the fact that not only do they want meat, but they want cereals, and they accept the third equation and love vegetables, and the jaw moves from side to side considerably because there has been a change in this type of people. The lymphatic has even greater movement of the jaws from side to side; and these people love meat, they love cereals, vegetables and they love liquids—in other words, they love anything you can put on the table. Their cusp regulation is in accordance with that; consequently there are few cusps, and the jaw has anterior-posterior, as well as a marked lateral movement.

Incidentally the terminology of these temperaments can be hastily illustrated in this way: We have always three faces to deal with—the face that is absolutely straight, with forehead, mouth and chin on a line, this is the Daniel Webster face (the straight face); next we have the Cardinal Newman face, with the heavy forehead, the protruding chin, sunken mouth and small nose (the concave face); and here we have the Henry Clay face, which is an oval face, with receding forehead, prominent nose and retreated chin (the convex face). So, you see, the straight face, the concave face and the convex face, and all people fall into one of these three classes. I am pleased that dentists and artists have accepted my definition of the basic faces as the straight, concave and convex.

The question is asked, When you have an edentulous mouth to deal with, how can you determine approximately what those teeth were? A good rule that has been used and advocated for many years is the one by Dr. Berry, of Milwaukee, who has made this a special study. He says the forms of the teeth are largely indicated by the general outline of the face. We must take into consideration the forehead, the eyes, the nose and mouth; and these same teeth are indicated more or less in the person's jaws. The temperament is there. It does not disappear. The profession has been given many lectures on this subject before local and national societies. We must try and

arrive at a standard of selecting teeth that will harmonize with the face.

Another method is the question of comparison with the finger nails. I have observed that the shape of the teeth and the shape of the nail are identical. Imagine the end of the finger nail the incisal edge, and you have the central; the finger proper will be the root end of the tooth. I have been taught this from observation. These are all theories, of course, founded on comparison, but there is a certain element of truth in them,



#### VARIETIES OF DENTAL AND FACIAL LINES

just the same. I will say let us not feel that all has been accomplished, because there is much to do; and along art lines we have only begun.

With reference to the forms of the teeth that are usually put into mouths, possibly the most distressing sight we have is where a person has irregular teeth, pitted teeth or Hutchinson teeth, and a beautiful porcelain crown that is perfect is put in which is four or five shades lighter than the case demands. There is absolutely nothing that is more out of harmony. Have the artificial tooth as dark as the neighboring tooth, and with

your mechanical ingenuity and skill make them rough, and make them appear as much as possible like those other apparently ugly teeth, for there is even harmony in ugliness. Harmony is not the only word we want. It is correspondence, the great law of correspondence, in which man has been created by an individual pattern, and not by some common pattern; for every man is created by his own and appropriate pattern, and in that pattern there is a law of correspondence. That word correspondence means a mutual adaptation of one thing to another; whereas harmony is a different thing. Correspondence means they are native,—born together,—while harmony is an artificial product or result. We have to study the laws of correspondence and adapt the rules of harmony.

We have also some difficulty with the subject of dental laboratories that is quite natural. A very large percentage of prosthetic work is done by the laboratory; possibly 75 per cent. If we have to resort largely to laboratories, it is for us to arrange a system whereby we can understand each other. For instance, we have a case requiring a special or peculiarly shaped tooth, which should be characteristic. If the laboratory people and ourselves were a unit on terminology, we could write to each other in a word or two; but I have read many of these letters to the laboratories, and models are sent in with nothing to guide people. We as a profession are unable to definitely describe, and hence all this conglomeration of ideas. Whose fault is that? Is it the fault of the laboratory? No. It is the fault of the dentist who sends in a description of a case, which description means nothing; and yet this is what we are doing—and blaming the other fellow.

Let us speak of a long bite, or a long incisal edge, or a short incisal edge; so that the laboratory man can understand what you mean. Aside from that, we would have the bow-faced tooth or the flat-faced tooth. All these are simple things, which a commission could solve. We could have slips made in such forms that when you ask for a thing of the laboratories you would get it. It is easier for them to give a dentist what he asks for than to be wondering what the dentist wants. We

have in connection with the same item the subject of bell-shaped teeth or square teeth and various other things, ramifying into innumerable classifications, which should be so simplified that we would work in harmony with the laboratory. We should have the spirit of "get-together," which would mean more to us than it could ever mean to them.

The same is true with reference to bridgework, in which there is generally too much gold shown; and that can be illustrated very nicely by this form of bridge as compared with that form of bridge (indicating), which is so often seen. Here is a bridge tooth that displays as much porcelain as possible. Here is one that displays as much gold as possible. Show the porcelain, and support it properly with gold. People will appreciate good dentistry—any person who says otherwise does humanity an injustice. Do not get the idea that people do not care. People do care: and the people will pay any man a high price and an exact price if he will "deliver the goods." The members of this great organization should go out and teach the public,—by views and lantern slides and lectures,—until the quack and advertiser is driven from the streets; not by force, not by law, not by derision, but because the public have been educated not to go where inefficiencies and misrepresentations rule the practice. We can cure them by education, and in no other way. Education brings men to truth and win their hearts and holds their admiration.

A set of teeth made at one time for a patient's mouth would not be the set that patient should want at another time. A set of teeth made for a lady of 22 would not be the set she should have at 45 years of age; and I do not believe we should lead people to expect that a set of teeth should last all of their lives—if they got such a set at 20. Such talk is absolutely out of accord with scientific thought, since we know that the dentures of nature grow darker. Wrinkles come where there were none before; and we should be alive to keep the face in harmony, as well as concord and correspondence, for there is our fine art. When we place a set of teeth in the mouth it should be in harmony; but we should take as a pattern the great law

**of** correspondence that gave the original set, and mold, and **carve**, and shape, and fashion, until we approximate the natural forms.

Years ago we studied our cases and treated them for **comfort** and durability. We of today not only want comfort, but we want function. We want appearance and character, but **should** command harmony and correspondence; and if we get them the patient will say: "That is what I want."

Dental prosthesis may be divided into three parts—dental **prosthesis**, oral prosthesis and (best of them all) facial prosthesis, the restoration itself. The face is changing because we **as** surgeons have subtracted or eliminated. Let us restore and **save** the patterns. There is art; and when you say there is no **art**, but mere mechanics, I say the only place in dentistry where you have fine art is in that prosthetic dentistry where you bring about the restoration of the edentulous mouth. The making of a gold filling is a mechanical art, whether you hammer or flow the gold. A good definition is that fine art must inspire the imagination. Fine art must inspire calculation. Fine art is measured today on a scientific basis. It is founded on art itself. If you will apply fine art to the practice of prosthetic dentistry, you will have an abundance of opportunity which will redound to your satisfaction, and your imagination will be aided by that other welcome agent—compensation. Do not retreat from your duty.

There are three reasons, I believe, why we should turn our work over to the laboratories. I asked this question at a meeting of the Wisconsin State Dental Society, and also at the Iowa State Society—what are the three reasons that make you send your laboratory work away? I told them to put the reasons on a slip of paper—not their names. The three reasons came forth. They are these: First, to avoid the soiling of the fingers. The next or second reason was to keep disagreeable odors out of the office. A third reason (given by nearly every dentist) was: "I can not get money enough for my labors in that division of practice." Here is another thing for a commission to handle. I need not dwell further on them, because they are three live questions, and I have advocated what I earnestly believe.

## COMMENTS

All roads lead to Chicago; but after you get in town all streets lead to the advertisers in THE AMERICAN DENTAL JOURNAL. This journal will not permit a "fake" or questionable "ad." If you do not get honest and proper treatment at the hands of those who hold advertising space, report it to Dr. B. J. Cigrand, editor, publisher and proprietor, Batavia, Illinois. If you are not a subscriber, send in your name and one dollar.

\* \* \*

Fifty years ago THE AMERICAN DENTAL JOURNAL was not in existence; but it will be news to the thousands of "golden anniversary visitors" to know that at that early date (1864) Chicago had a dental journal, which was known as the *People's Dental Journal*, and its editors were the famed Dr. W. W. Allport and Dr. T. T. Creighton—and Chicago was not so slow or far behind even fifty years ago! The dental and medical headquarters



were at the old Sauganash Hotel, at the corner of Lake and Market streets. Some changes since then! THE AMERICAN DENTAL JOURNAL and the *Dental Review* are the present-time exponents of dental progress in Chicago; while the dental headquarters are the massive, elaborate and modern Hotel LaSalle. Five thousand dentists will be in Chicago March 22, 23, 24, 25 and 26. Shall we count you?

\* \* \*

Mr. Wallace A. Carlson, who has favored THE AMERICAN DENTAL JOURNAL with a dental cartoon, and which comic pict-

ure appeared in the *Chicago Inter Ocean*, can be accorded a few words of praise by the editor.

Mr. Carlson, while a native of St. Louis, and still in his teens, has had a remarkable career as a newspaper artist, having been for the past five years the "sporting sheet" cartoonist. His illustrations have life; they are clean cut, like himself, and are impregnated with a comic yet realistic spirit.

We are indebted to Mr. Hassler, of the *Inter Ocean*, for the favor of this splendid contribution.

The history of this cartoon, as written to your editor by Mr. Carlson, is: "The accompanying cartoon suggested itself while I was waiting in a dentist's office; although the cries of agony issuing from the dentist's office were really imaginary." The last clause of his story saves him from having a damage suit entered, and portrays what Longfellow wrote: "Things are not what they seem."

DR. B. J. CIGRAND,  
Editor, Batavia, Ill.

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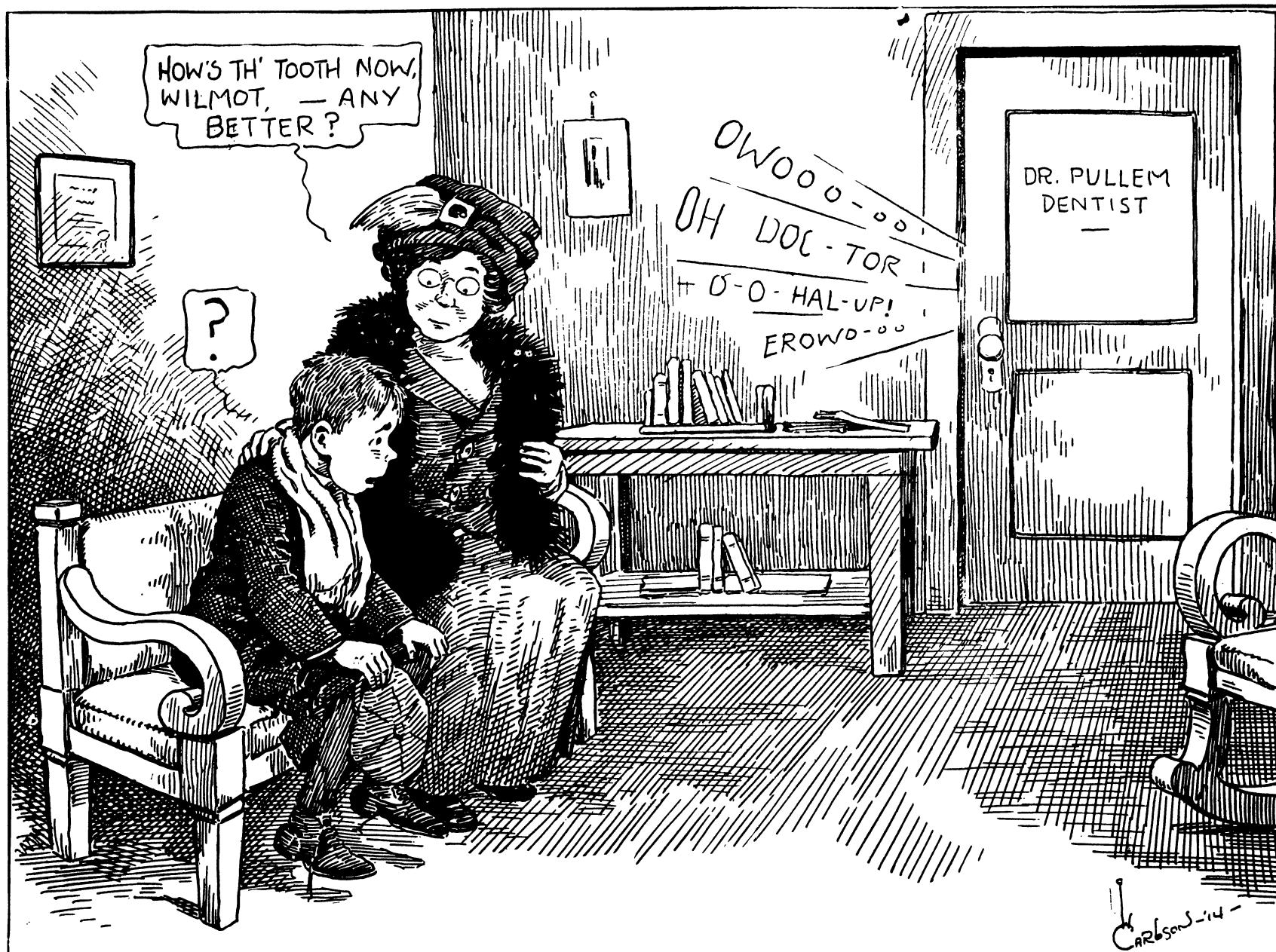
THE AMERICAN DENTAL JOURNAL will continue—as it has for many years—to wage a relentless war on the policy of dental boards exacting theoretical or practical examinations of practitioners who possess diplomas of reputable colleges, and who also possess licenses from state boards of dental examiners. Any reputable practitioner who has practiced five or more years in any state should, without examination, be accorded the right to practice anywhere under the American flag without being subjected to the expense of digital or mental examinations.

Now, if what this issue indicates pleases you, and if the general tone of its pages merit your good-will, send your check, money order or stamps for one dollar to Dr. B. J. Cigrand. Your support will be appreciated by your fellow-practitioner.

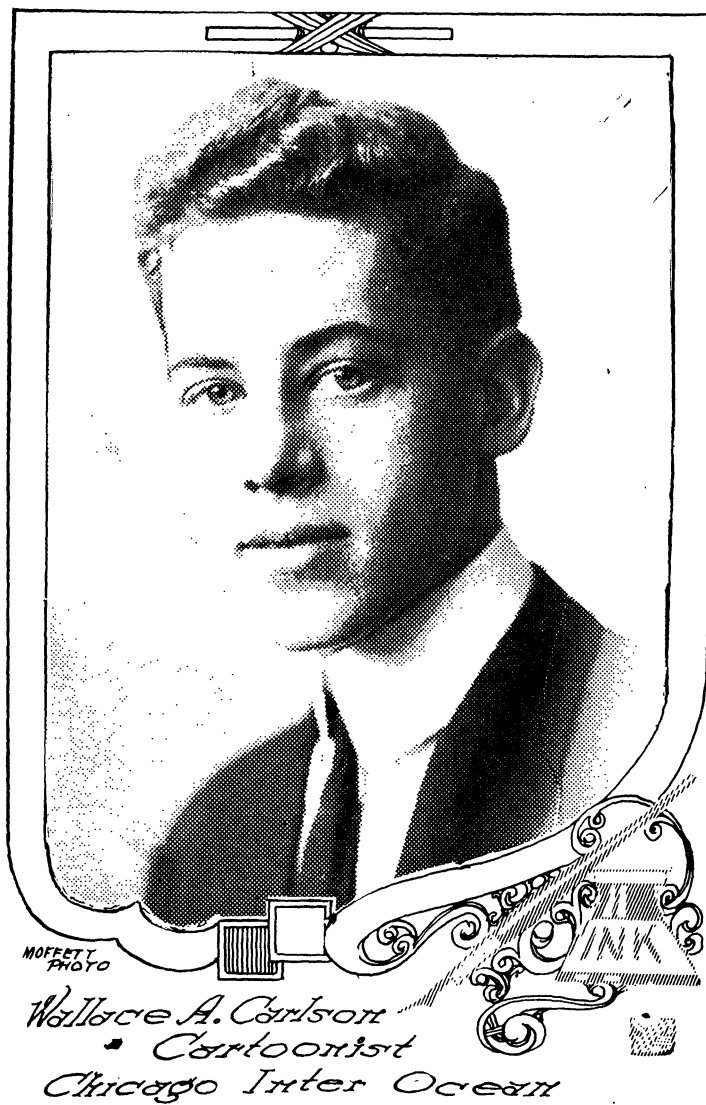
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We must impress dentists that back numbers of THE AMERICAN DENTAL JOURNAL will cost 25 cents per copy. The only way to be sure of better service is to pay \$1 and get twelve (12) (xii) copies, or a year's subscription.











# ORIGINAL CONTRIBUTIONS

## THE BALLAD OF ARABELLA—ROMANCE OF HER TEETH

BY J. T. TROWBRIDGE

[By a special arrangement with the publishers of the prose and poetry of the famed author, John Townsend Trowbridge, THE AMERICAN DENTAL JOURNAL publishes a poem which is likely to be classed as one of his most humorous, and the entire theme relates to the teeth.

The readers of THE AMERICAN DENTAL JOURNAL will remember the stories of Trowbridge, as they are among the most fascinating to be found in the *Youth's Companion*, *Atlantic Monthly*, *Harper's* and other leading periodicals. He was editor of the popular journal, *Our Young Folks*, and has published scores of books. Among his best are "Hearts and Faces," "The Scared South" and "Story of Columbus." He was born in Ogden, N. Y., Sept. 18, 1822.

John Burroughs wrote of him: "He knows the hearts of boys and men, and has laid them open in his books."

It sure is a pleasure to be privileged to present his dental poem —EDITOR.]

'Twas the good fast yacht, "The Mermaid," that went sailing  
down the bay

With a party predetermined to be jolly, one would say,  
By the demijohns and boxes, by the lemons and the beer,  
And the ice, that went aboard her just before she left the pier.  
With the wind upon her quarter, how she courtesies and careens  
To the nodding, laughing billows! how her tower of canvas leans!  
Past the headland, by the islands, with the flying gulls she flew,  
And her long wake lay behind her like a stripe across the blue.  
And I guess that all were happy on her deck—except, perhaps,  
Mr. Brown, one of your poetizing, sentimental chaps;  
In the midst of joy and juleps he sits spiritless and pale,  
With his chin upon his knuckles and his elbow on the rail—  
Quite Byronic, I assure you—and his mournful gaze intent  
On the fascinating features of Miss Arabella Bent.  
That is she beside the mast there, with the tumbler and the  
straw;

Such a laugh you hear but seldom, and such teeth you never saw.

Quite distinguished for her beauty—say, a dozen years ago—  
And as famous for her fortune; that has doubled, as we know.  
And I say it is a pity that an heiress can't invest  
In some beauty-saving fund, and keep her charms at interest.



But though the envious tongues will tell you that the native  
growth is thin

On her temples, and perhaps a shade too heavy on her chin,  
Still Miss Arabella tosses a superb array of curls,  
And the downy lips are parted by a dazzling row of pearls.

Teeth so fine you might suspect them, but that curious eyes  
behold

“In their milky way of whiteness just one little star of gold”—  
That is what our poet called it in a sonnet that he wrote,  
Which 'tis much to be regretted that we haven't room to quote.

She has had a hundred lovers, and she held them cheap as dirt—  
For I grieve to say she's been a most unconscionable flirt.  
But they fell away to sixty, and they dwindled down to six,  
And now, having passed the forest, she must make a choice of  
sticks.

Only two at last are left her—Col. Birch and Mr. Brown.  
It was long a question which should be the envy of the town.  
For a while it seemed the poet; now it certainly is Birch,  
And at 10 o'clock next Tuesday she will marry him in church.  
There he is—and not by any means a crooked stick is he;  
It is wonderful how very straight an old Bent beau can be!  
He has fought his country's battles—in a commissary's tent;  
And he still is young and handsome—in the eyes of Bella Bent.  
Well might her perfidious conduct drive a poet-lover mad!  
After all his sighs and sonnets, it was really too bad.  
Although poor, and six-and-thirty, and his last book hasn't sold,  
'Twas her teeth that took his fancy, and he cares not for her  
gold.

Calmly sipping, sits the colonel; and he keeps his eye the while  
On his heiress; and you read it in his half-developed smile,  
Cold and quiet as his saber's edge just started from its sheath—  
'Twas her gold that fired his fancy, and he cares not for her  
teeth.

So the yacht sailed down the harbor to a favorite fishing ground,  
Where the skipper dropped an anchor; for the gentlemen were  
bound

Just to try their hands at cod, and have a chowder. There  
she lay

Rocking on the ocean billows that came rolling up the bay.

And the hooks went down with clam-bait, and—in short, the  
luck was fine;

Even Brown grew interested in an unpoetic line;  
And he smiled; but Arabella grew as suddenly quite pale,  
Leaned her cheek upon her hand, and laid her arm upon the  
rail.

Like the lady in the ballad, she grew sick as he grew well;

With the heaving of the billows her fair bosom heaved and fell;  
He is actually jolly, when, at every sudden lurch,  
Dizzy, dreadful, dying qualms oppress the future Mrs. Birch.  
She is bending by the gunwale—all at once you hear a scream—  
From her lips, in anguish parted, with a glitter and a gleam,  
Something darts into the flashing wave, and disappears beneath,  
While in strangely altered accents, "Oh, my teeth!" says she,  
    "my teeth!"

Then as she is wildly leaning, gazing down in despair,  
One mad breeze has snatched her bonnet, and another has her  
    hair.

It all happened in a moment—in the ocean sink the pearls,  
And far off upon the water float the bonnet and the curls.  
And could that be Arabella, the pale ghost that shrieking fled?—  
All below, a lovely woman, but above, a spectral head!  
Something sadder than seasickness now disturbed the maiden's  
    breast,

And it wasn't her lost tresses that had left her so distressed.  
Brown was busy with his fishing, and just then he had a bite;  
The sharp line it cut his fingers, but he pulled with all his  
    might.

"Help!" he shouted. 'Twas a monster, but at last it flopping lay  
In the yacht, just at the moment they were getting under way.  
"Now what's up?" says Brown. "The anchor—and a big fish  
    on your line!

Don't you know? Why, Arabella gave her salt tears to the  
    brine,

And her hairpins to the sculpins, and—the oddest thing of all—  
What should fall into the water but her waterfall!"

Much amazed was Brown to hear it (though the worst had not  
    been said),

When up spoke the jovial skipper: "Now let's put for Porpoise  
    Head;

There we'll land and have our chowder; we have fish enough,"  
    says he.

"First the locks are to be rescued; we will run then for the  
    quay.



"Steer for yonder bobbing buoy!" It was the chignon that he meant.

Soon the yacht was laid alongside; out from her a paddle went. Vastly pleased were all to see it, and indeed they had been dull Not to smile at woman's tresses dripping from "The Mermaid's" scull.

Then they made for Porpoise Landing. In the cabin, Birch, the while,

Pleaded fondly with his lady: "Dearest, let me see you smile—Here's your beautiful new bonnet, and your very wavy hair." But she said: "Oh! what's a bonnet? and, oh, colonel! what is hair?"

From her interesting features then her handkerchief she took, Opened wide those lovely lips of hers, and hoarsely whispered: "Look!"

All that dazzling row had vanished! Birch's blood within him froze;

But he quickly said: "I love you—love you still, in spite of those!"

"But you do not, oh! you do not, see the point, dear colonel, yet! Full five weeks it took my dentist to get up that splendid set; And, alas! I've been and lost 'em where you can't go down and search.

And how *can* a woman give her hand—without her teeth—in church?

[To be continued.]

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## THE TRUTH CONCERNING VIVISECTION

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BY DR. EDWIN F. BOWERS

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[The daily papers of the world are filled with articles calculated to lead the public against vivisection. There may be truth in the accusations—but what of the dental and medical progress?—EDITOR.]

I believe it was Bill Nye who said "Sometimes it's better not to know quite so much than to know so many things that ain't so." This sage observation is vivified by the Quixotic tilt-

ing of the anti-vivisectionists against inquisitorial horrors which are, in the main, bodied forth only in imagination. Of this substance they have built an elaborate structure, with vasty domes, towering cupolas, ornate cornices, bewildering labyrinths and halls capable of accommodating myriads of blood-spattered vivisectors.

In the dank, fearsome dungeons of this grisly edifice they have pictured the experimentors at their cruel work.

Amid ear-piercing, soul-harrowing shrieks and screams of pain the bloody villains have celebrated their wicked orgies.

Now, where there is much smoke there is usually some fire. This is admitted, to start with.

Without doubt some of the earlier vivisectors were ferocious tigers, masquerading as human beings, one in particular—a degenerate Italian surgeon—published some years ago a series of reports describing in detail incredible cruelties practiced upon dogs, with a view of determining the amount of baking, broiling, bone-breaking, blood-letting and maiming a poor beast could suffer before merciful death came to its relief.

Another shark-hearted hyena brought disgrace upon his profession in an effort to ascertain how much suffering it was necessary to inflict upon a mother collie before all evidences of affection for her little puppies would be obliterated. The particulars are nauseating. No punishment could be too severe for the criminals perpetrating these cruelties.

However, these brutes, these fiends incarnate, are held in contempt by all right-thinking medical men. They are classed as degenerates with homicidal tendencies, modern Caligulas and Borgias, who vented their lust for cruelty upon redressless and defenseless creatures—all in the fair name of science.

Science repudiates these demons and their infamous work—work which has brought her nothing but shame. It is from these bestial practices, comparative infrequent and now happily obsolete, that anti-vivisection derives its stock arguments.

Our modern vivisectors, our Pasteurs, Kochs, Flexners and Carrels, are men of entirely different motives and character,—high-minded, scholarly, humane and altruistic,—men who represent today the very best thought in the medical world.

Vivisection—or, more properly, animal experimentation, as recognized by modern science,—has given us a large part of our knowledge concerning the uses and toxicity of much of our *materia medica*.

It has indicated the paths to surgery of the brain and the internal organs. It has afforded us definite methods of dealing with septicemia, infantile paralysis, malaria, yellow fever, diphtheria, tetanus, tuberculosis and many other germ diseases.

So great an authority as Dr. E. L. Trudeau has said: "Everything that we know today of the causes of tuberculosis, everything that has a direct bearing on the prevention and control of this disease, we owe to animal experimentation."

Animal experimentation has provided us with remedies for the successful treatment of syphilis, plague, cholera, "sleeping sickness," "hookworm" disease and other conditions which formerly received merely empirical attention.

It has enabled our surgeons to transplant tissue, arteries, bones, and even organs. It has developed that wonderful technique which now makes it possible for a skillful operator to repair a laceration in the living, pulsing heart.

It has even saved the animals themselves—millions of them—that formerly died of "hoof and mouth" disease, hog cholera and other ailments.

And Pasteur's work with the silk worm reimbursed France for the loss of Alsace and Loraine.

It would require a volume to tell us what animal experimentation has done to furnish mankind with accurate information concerning causes of disease and specific methods of treating the same. This is so obvious that one can hardly discuss the subject academically.

And yet the vigilant "anti," clad in skins of animals trapped or shot not infrequently under cruel conditions; decked out with an egret plume plucked from the quivering breast of a parent bird, whose little ones were left to die of starvation; feeding upon the flesh of animals or fishes, trophies, perhaps, of their "sportsmanship"; these rant and cavil at the amelioration of suffering by those who labor unremittingly that the "angel of

the darker drink" may be frustrated of his purpose—that mankind may live its allotted span.

The very interesting "Report of the Royal Commission on Vivisection" lies before me as I write. It is an illuminating summary of the researches of a painstaking body of investigators examining this matter with characteristic English thoroughness.

They dispose effectually of the objections of numerous anti-vivisectors, notably Miss Lind-af-Hageby, who charged animal experimentors with inhumanity and cruelty in a book entitled "The Shambles of Science," accusations which were brought by her before the commission. The most important of them referred to the case of a marmot, described by her as follows: "We now see a marmot, the spinal cord of which had previously been divided by a vivisector. His finger was bleeding a little, and he tied his handkerchief around it and looked a martyr. 'Are they not nasty animals?' You'll have to be careful of them," said another vivisector who was engaged in cutting up mice. And the nasty, unscientific animal was accordingly removed to a safe place."

It appeared on investigation that no operation had ever been performed on this particular marmot; that the apparent paralysis of its hind legs was merely temporary, and was due to the fact "that it was but beginning to wake out of its natural hibernation"; that it lived for two years after Miss Lind-af-Hageby saw it, and that it ultimately died a natural death."

The facts about it were published two years before the publication of her statement. The commissioners say (gently) that the lady's assertions must have been "founded on a misapprehension" on her part; and they have also come to the conclusion that other witnesses have "either misapprehended or inaccurately described the facts of the experiments."

And they further add:

"1. We desire to state that the harrowing descriptions and illustrations of operations inflicted on animals, which are freely circulated by post, advertisement or otherwise, are in many cases calculated to mislead the public, so far as they suggest

that the animals in question were not under an anæsthetic. To represent that the animals subjected to experiment are wantonly tortured, would, in our opinion, be absolutely false."

"2. That, notwithstanding failures, valuable knowledge has been acquired in regard to physiological processes and the causation of disease, and that useful methods for the prevention, cure and treatment of certain diseases have resulted from experimental investigations upon living animals.

"3. That as far as we can judge, it is highly improbable that, without experiments made on animals, mankind would at the present time have been in possession of such knowledge.

"4. That in so far as disease has been successfully prevented, or its mortality reduced, suffering has been diminished in man and in lower animals.

"5. That there is ground for believing that similar methods of investigation, if pursued in the future, will be attended with similar results."

And to this what succeeds more fittingly than silence—on the part of the vivisectors?

Our Rockefeller Institute, our research societies all over the world, are engaged in a quarterless battle with the "infinitely little" foes of humanity. Let us accord them every encouragement and assistance that within us lies.

They are soldiers of humanity, fighting valiantly for the common good.

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## THE NOSE DETECTS DISEASE

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BY L. K. HIRSHBERG, A.B., M.A., M.D.

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[Physicians have long recognized the importance of keeping their nose free from catarrhal troubles, since a diagnosis is considerably aided by the olfactory nerve. The same applies to careful dental practitioners. Every element which assists you in determining conditions should not be overlooked.—EDITOR.]

The rankest, most villainous smells have a virtue all their own in the diagnosis and treatment of many ills. It is said that Dr. Austin Flint could smell a small-pox patient a mile off; and

upon one occasion he emptied a street-car in the flash of an eye by sniffing and saying, with authority: "Someone in this car has small-pox." In a similar fashion Sir William Osler used to claim to be able to locate typhoid fever (before he actually saw the patient) by means of a peculiar fishlike smell. Dr. Robert E. Coughlin, of Brooklyn, has built up a very noteworthy method of distinguishing one human ailment from another by the use of his nose.

It is indeed strange that the cultivation of the sense of smell has so long lagged behind the training of the eye and ear, touch and movement. In medical schools, particularly, all the instruments hitherto used as aids in unearthing disease have been tools of hearing and vision. The microscope and thermometer aid the eye; the stethoscope and cardiophone aid the ear. Even the sense of touch and the muscle sense are cultivated and encouraged, but the nose almost never.

Yet a hound or a rabbit, a fly or a carrion crow, could not long survive in the struggle for existence if their olfactory organs were as neglected as man's. Indeed, the nearer to a wild state a man lives the closer he is to nature and the sharper is his sense of smell. This does not mean that dirty, lowly civilized people have a refined mode of detecting odors, for the stench emanating from the homes of many races are scarcely noticed by the natives themselves, while, on the contrary, they are instantly apparent to the ultra-civilized English and Americans.

Every man, woman and child has an odor of his own. Each age and sex has one that is peculiar and different from the other. Furthermore, these odors can all be studied, labeled and made to serve the skillful observer in detecting the characteristics of the individual. The odor of old men is strikingly different from that of the male infant, while the odor attached to dark-skinned persons is obviously unlike that associated with light-skinned. Even various gradations of smells are attached to different degrees of bronzing of the skin in brunettes. Dried and seared leaves emit a fragrance which resembles that of the aged.

True enough, all odors are lessened after bathing, and when these characteristic odors are obtrusive bathing should be done at least twice a day. But even the steam bath does not wholly remove them, because they are part of your nature. Only when the tissue becomes altered by disease or changed occupation are these odors in any way altered. Tommy Atkins well yields not the same scent as Tommy Atkins sick, and the type of smell that the alert doctor notes about Tommy's bed when he is ill aids in a manner in the recognition of his ailment.

Tuberculosis has an odor in its later stage said by Dr. Coughlin to be distinctive. Even appendicitis, with the formation of pus, has its peculiar smell. Various types of kidney disorders can be suggested by the odors emitted, and diabetes is said to manifest itself by an odor like the fragrance of sweet peas.

It is no Munchausen story to say that a medical Sherlock Holmes can tell by the odor of your fluid excretions—such as perspiration and the like—whether you have recently been taking such medicines or foods as valerian, asafoetida, asparagus, garlic cubebs and many others. The odor of violets thus noted indicates that turpentine has been taken.

Like the senses of sight and hearing, the sense of smell quickly tires. Hence it is only before fatigue sets in that a doctor can diagnose different ailments by the sense of smell alone. If he is a smoker or a drinker it is useless to depend upon the nose.

Rare ailments, such as bronchiectasis or dilated tubes in the lungs, gangrene of the lungs and large pulmonary cavities, have all been made evident by odors. A sour-scented breath points just as clearly to an excessively acid stomach as a literally sweet breath does to the sugar disease. In the middle ear diseases the odor from that bit of anatomy is like that of a camembert cheese.

A nose not overly sharp can discover such hygienic and unhygienic odors as sewer gas, cellar air, illuminating gas, decaying fruit, coal gas, putrid meat, new-mown hay, fresh country breezes, frosty morning air, showery atmospheres,

ocean winds and the invigorating ozone that follows a thunder shower.

All of this makes it plain that man's sense of smell can be of the greatest assistance to him in seeking the beneficial and avoiding the dangerous. The neglect of this one important sense has necessarily kept mankind backward. It therefore rests with the educators of the future to properly train and pay attention to odors, so that everyone may be able to distinguish seven octaves of smell or a great spectrum of odors.

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## SEXUAL INFLUENCE ON THE TEETH

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BY DR. M. R. ROBINSON, OF PARIS

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[Just at present the English and French journals are filled editorially regarding the relationship of the sexual state with dental conditions. Prof. G. F. Lydston, of Chicago, has written considerably along this same line. Investigations seem to associate dental circumstances with troubles in remote parts.—EDITOR.]

At the French Academy of Sciences I recently read a communication on the perfect preservation of the teeth in seven male donkeys aged between 10 and 14 years, and conclude that a physiological relationship exists between the genital glands and the dental system. These animals, which had been used in the experiments of Prof. Lannelongue, were insusceptible of sexual excitement. Their food was hay. On the other hand, a young cryptorchid *griffon*, a very salacious beast, upon which the doctor had made a necropsy, had lost all its teeth when quite young. Toothache is said to occur in young masturbators, and it appears that true eunuchs have fine teeth. The old belief of the effect of gestation upon the teeth may thus be true. As a result of this clinical observations I am satisfied that in diabetes and tabes it is through the intermediary of the genital glands that the teeth become worn, carious, or simply fall out. But does there exist a reciprocal effect of the dental system on the physiology of the genital glands? In two cases the removal or the rapid loss of many teeth together induced grad-



ual atrophy of the testicles and complete impotence. In the case, therefore, of one who loses in an unusual manner many teeth the genital organs should, I think, be examined, and, if necessary, the ovaries in a case of chronic salpingitis, or the testicles in tumors or testicular tuberculosis should be removed. Further, rational opotherapy should remedy premature decay of the teeth. The communication (says the *Lancet*) was suggestive rather than convincing.

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## YOU CAN USE THESE IDEAS

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### CLEAN FLASKS

Put a coil of sheet zinc into the water in the vulcanizer and it will prevent the formation of much of the black oxids which form on iron flasks. After using a few times the flasks will soil the fingers but very little.

### POLISHING CROWNS

To prevent marring a gold crown when polishing, wet the inside of the crown with soap solution, fill it with modeling composition, and while the latter is still soft thrust the end of a stick or instrument handle into it. When the crown is finished soften the composition in warm water and remove.

### TO PREVENT PAIN WHEN INSERTING HYPODERMIC NEEDLE

The spot where the needle is to enter is touched with a toothpick dipped in pure carbolic acid. A white spot immediately appears, due to the coagulation of the albumen of the tissues. Shortly afterward perfect anæsthesia of the spot is manifest, and the hypodermic needle can be pushed through the skin without pain at this point, and the infiltration of the tissues begun. If a large area is to be injected, several spots are marked in the same way for insertion of the needle.

### DUPLICATING PLASTER MODELS

Dr. Eugene Muller, in *Schweizer Vierteljahrsschrift*, gives the following method of duplicating plaster models: Allow about 150 sheets of ordinary gelatin to stand for one or two hours in cold water. It is then cooked and into it from 120 to 150 grams

of oil are incorporated. The model is then placed in an enameled vessel, and the mixture is poured over it. After three hours the impression will have hardened, enabling one to make a facsimile of the plaster model.

#### FOR BLEEDING AND TENDER GUMS

Gelatin, 30 grains; sodium chlorid, 8 grains; carbolic acid, 2 grains; beta-eucain hydrochlorate, 8 grains; cocain hydrochlorate, 2 grains; distilled water,  $3\frac{1}{2}$  ounces. S.—Use as a mouth-wash.

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#### AN OLD JOKE ACTUALLY ENACTED

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[The old pictorial joke of sitting on the free end of a limb of a tall tree, and with a saw cutting away the support, has in reality been enacted, and the thoughtless man knocks out a dental quartet. —EDITOR.]

[From the North American.]

ELLEN CHAPEL, Pa., Feb. 4.—Harry Kochenderfer has a good many trees at his place here, and today he decided he would trim them.

Taking the necessary tools for the operation, he placed a ladder against a stout limb, climbed about twenty-five feet and got busy.

But, like Schoopendyke, he sawed away his support, and took a header to the frozen ground. Result:

Nose fractured.

Four teeth knocked out.

Tongue almost cut in half.

Bruises all over head and body.

Kochenderfer, though in a serious condition, is expected to recover.

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